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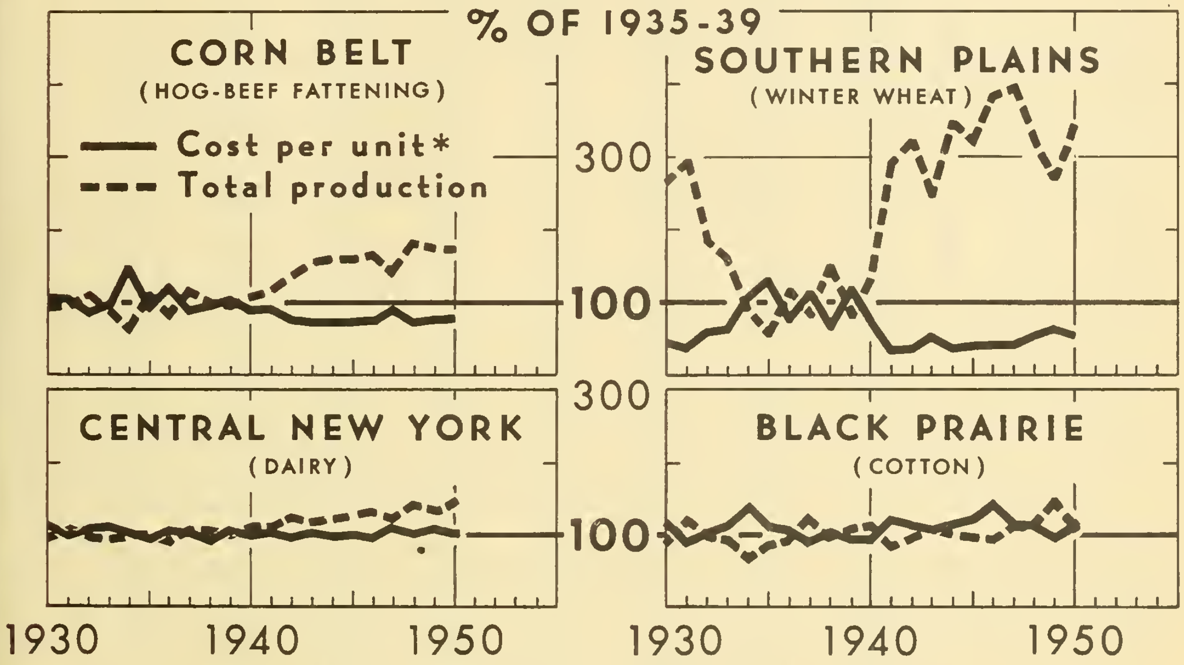
THE Farm Cost SITUATION

BUREAU OF AGRICULTURAL ECONOMICS
UNITED STATES DEPARTMENT OF AGRICULTURE

FCS-10 BAE MARCH 1951

COSTS OF PRODUCTION ON FAMILY FARMS



*PER UNIT OF PRODUCTION. EXCLUDING PRICE CHANGE

U. S. DEPARTMENT OF AGRICULTURE NEG. 47225-XX BUREAU OF AGRICULTURAL ECONOMICS

Costs of farm production, in terms of physical inputs, have shown the largest decline for those types of farms where total production has increased the most. In general, crop farms have shown relatively larger gains in production efficiency than have livestock farms. Hybrids and other higher yielding varieties of seeds, favorable weather, and labor-saving machinery and equipment in recent years have been particularly favorable to crop producers.

Goods and services used in production: Prices paid by farmers and farm wage rates, United States

(Index numbers 1935-39=100)

Year	All commodities 1/	All commodities 2/	Feed	Live-stock	Motor supplies	Motor vehicles	Farm machinery	Farm supplies	Building and fencing materials	Ferti-lizer	Seed	Wage rates 3/
1910	75	78	93	74	---	---	65	69	69	96	78	79
1911	77	79	94	69	---	---	65	71	71	96	90	81
1912	81	82	98	77	---	---	65	71	71	98	98	83
1913	81	81	92	90	---	---	65	73	70	99	81	86
1914	83	82	97	93	---	---	65	73	64	100	75	83
1915	84	84	96	92	---	---	67	78	70	106	75	83
1916	93	93	104	100	---	---	71	86	81	121	104	93
1917	121	126	167	128	---	---	80	115	94	133	138	117
1918	140	145	178	146	---	---	101	149	111	169	149	146
1919	153	157	198	148	---	---	105	157	130	178	170	170
1920	162	157	198	150	---	---	108	156	141	177	202	199
1921	118	103	100	71	---	---	105	135	108	149	104	129
1922	118	102	108	87	---	---	93	116	110	125	100	127
1923	127	111	129	90	---	---	97	120	110	131	105	142
1924	129	113	132	94	125	88	101	125	111	124	107	150
1925	131	117	136	100	133	89	101	124	113	136	122	150
1926	129	114	116	106	138	87	101	125	112	135	142	151
1927	129	114	122	119	123	89	101	122	110	118	125	152
1928	133	119	132	146	120	90	101	123	109	128	111	152
1929	131	118	130	143	119	92	100	122	110	127	113	154
1930	124	109	116	106	113	89	99	120	107	124	110	146
1931	106	91	82	74	96	89	98	111	95	112	88	115
1932	92	80	61	61	95	88	93	98	87	98	57	86
1933	87	80	70	56	93	87	90	91	90	91	61	73
1934	94	92	98	56	99	92	94	96	101	103	88	82
1935	98	98	101	94	99	93	97	96	99	102	105	88
1936	99	99	104	90	100	97	98	97	98	97	93	94
1937	106	107	118	102	102	101	100	102	102	101	130	107
1938	99	98	89	101	101	107	103	104	101	100	94	107
1939	98	98	88	113	98	102	102	101	100	100	78	106
1940	99	99	95	115	96	101	100	104	101	96	86	107
1941	106	105	103	130	99	107	101	111	108	96	82	125
1942	121	119	126	152	106	116	107	123	118	107	111	163
1943	137	132	149	173	109	121	111	137	123	114	139	217
1944	148	140	165	163	111	131	114	144	131	116	158	263
1945	154	142	164	178	111	135	115	146	134	118	162	297
1946	167	154	190	202	113	139	119	147	146	119	167	320
1947	190	181	225	252	124	161	135	159	191	131	192	346
1948	210	202	238	312	138	181	157	169	212	143	223	365
1949	202	192	196	277	140	199	176	176	210	147	202	354
1950	208	199	200	324	144	200	180	177	218	141	194	352
Jan.	202	191	191	283	---	199	---	---	---	---	---	349
Feb.	202	191	190	294	---	---	---	---	---	---	197	---
Mar.	203	193	191	306	140	198	178	175	206	---	194	---
Apr.	204	194	194	310	---	---	---	---	---	141	194	353
May	208	198	204	326	---	---	---	---	---	---	194	---
June	209	199	202	331	141	---	179	176	211	---	---	---
July	210	201	206	331	---	198	---	---	---	---	---	355
Aug.	210	201	207	327	---	---	---	---	---	---	---	---
Sept.	211	202	203	340	146	201	182	178	226	141	189	---
Oct.	211	202	201	341	---	---	---	---	---	---	---	353
Nov.	213	205	204	349	---	---	---	---	---	---	---	---
Dec.	215	207	210	355	149	204	183	179	229	---	---	---
1951												
Jan.	222	213	219	381	---	203	---	---	---	---	---	372
Feb.	226	218	222	407	---	---	---	---	---	---	193	
Mar.	229	221	224	415	---	---	---	---	---	---	195	372

1/ Including interest, taxes, and wage rates. Excludes family living.
2/ Excluding interest, taxes, wage rates, and family living.
3/ Simple average of quarterly indexes seasonally adjusted.

Note: For a list of items included in this table see "Agricultural Prices", Bureau of Agricultural Economics, January 31, 1950.

THE FARM COST SITUATION

Approved by Outlook and Situation Board, April 4, 1951

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GENERAL SITUATION

Farmers' production expenses in 1951 are expected to be 10 to 15 percent higher than in 1950 when they reached the highest level on record.

During the first three months of 1951, prices paid by farmers for production items, interest, taxes, and wage rates averaged 12 percent higher than in the same months of 1950 and 13 percent higher than in 1949, and for the year, will average higher than in any previous year. However, total production expenses will be up even more than prices of production items because an increased quantity of goods and services will be needed for the record farm production in prospect for this year.

Supplies of some production items are expected to be short. However, record farm production probably can be attained if available supplies are properly distributed.

Not only will most production goods and services cost more in 1951, but other expense items will be up. With farmers using more credit, total interest payments will increase. Taxes also will be higher. Those buying land will find that prices are substantially higher than a year ago and at an all-time peak in many parts of the country.

Farm wage rates in 1951 probably will average at least 10 percent higher than in 1950. Some areas will have difficulties in getting an adequate supply of farm labor, although the supply is expected to be generally adequate. The armed forces and industry will continue to take manpower from farms, but if recruitment campaigns are effective more extensive use of persons not now in the farm labor force as well as farm workers from outside continental United States will help to fill the gap.

Farmers had a record amount of machinery at the beginning of 1951, and there probably is enough machinery now on farms, if it can be kept in repair, to maintain farm production at a high level in 1951. But production of some of the newer types of farm machines may not be sufficient to meet the demand this year. Prices of farm machinery are about 10 percent higher than a year ago.

Prices of fertilizer are a little higher this spring than last fall but still somewhat lower than in 1949. However, the main problem is that of obtaining as much fertilizer as could be used to advantage. Prospective supplies of phosphates for the 1950-51 season are below those of last year. Supplies of nitrogen and potash, though substantially larger than last year, probably will be below what farmers would buy if larger supplies were available.

Prices of most materials used for the construction and maintenance of farm buildings and fences will be at record highs in 1951. Prices of these materials in December, 1950 averaged about 17 percent higher than a year earlier. Supplies and production of lumber in early 1951 have been substantially above a year ago, but if credit and material restrictions result in some reduction in the current high rate of construction, both demand and prices may fall off from present levels. Metal products used in farm construction and maintenance may be in shorter supply than last year but supplies are expected to be more adequate than during the last national emergency.

Production of baler and binder twine probably will be adequate to meet 1951 requirements. Production of bale ties has increased in recent months and the supply should be adequate to avoid a recurrence of last year's severe shortage, although some local shortages may occur because of distribution problems. Supplies of most types of wooden containers are expected to be adequate but bags and paper packaging materials may be in short supply.

Production of insecticides and fungicides in 1951 is likely to fall somewhat short of demand. Carry-over stocks last September were the lowest since 1946, and production in 1951 will be limited by the short supplies of such raw materials as chlorine, benzene and sulfur. Wholesale prices of most of the important pesticides have risen substantially since last July and DDT and pyrethrum are difficult to obtain even at the prices currently quoted. Supplies of some of the newer types of insecticides for the control of boll weevil are expected to be tight, but calcium arsenate will be available as an alternate.

Prices of feed are about 10 percent higher than 6 months ago and more than 20 percent higher than a year ago. Relatively favorable rates of return from feeding, combined with increased numbers of livestock on farms, will result in the use of nearly a fourth more feed during the current feeding year than was produced in 1950. Feed grain stocks next October are expected to be nearly a fourth lower than those of a year earlier. Consequently, there is need for a larger feed grain crop in 1951 than in 1950 if current rates of disappearance continue. Many farmers could hold down their feed costs by using more roughages and pasture and still obtain good returns from their livestock.

Farm Labor

The supply of farm labor in 1951 will be smaller than in 1950. Difficulties in getting an adequate supply of farm workers will be encountered in many local areas. But labor supply will be adequate to keep farm production at high levels if effective recruitment campaigns are conducted.

Farm wage rates at the beginning of this year were 7 percent higher than in January 1950. Rates during both 1949 and 1950 averaged 3 percent lower than the record rates of 1948 (table 1). Further drain of manpower from farms to industry and the armed forces are in prospect this year. As a result, farm wage rates in 1951 likely will increase above those of 1950 by 10 percent or more, and reach a new record level. The extent of the rise in rates may be affected by developments in the wage stabilization program for both agriculture and industry.

The full effect of this year's defense program on the supply of farm labor probably will not be felt for several months. As more of the defense contracts progress from the planning stage to the actual production phase, industrial demands for workers will increase, even though considerable conversion of civilian production to defense production occurs. Despite a further rise in farm wage rates, industrial job opportunities will attract many farm workers. Additional losses of farm workers also will occur from expansion of the armed forces.

The supply of domestic migratory farm workers probably will be less this year than in 1950. Partly offsetting this probable loss is the prospective increase in the number of workers recruited from foreign countries, and in the number of Porto Ricans coming to Continental United States for farm work. Some farmers will have to rely considerably on seasonal workers such as women and youth who normally may not have engaged in farm work. More effective use of workers now living on low producing farms also offers opportunities for increasing the effectiveness of the Nation's labor supply.

The supply of seasonal farm workers relative to the demand probably will be shortest in the fall. If the manpower requirements of the defense program continues to increase, as now seems likely the effects of this on the supply of seasonal farm workers will be most pronounced by fall. This also is the time when the seasonal peak demand for farm labor occurs. Labor supply difficulties are in prospect in a number of local areas this fall, including some areas in the South where a large cotton crop is anticipated.

A smaller supply of year-around workers is also expected. Dairy farmers in areas adjacent to industrial centers are likely to experience the greatest difficulty in securing regular workers.

Productivity of farm workers is greater now than ever before. This has been brought about chiefly by increased mechanization, widespread adoption of improved farming practices and generally favorable weather. Technological advances in farming also have meant that, over the years,

Table 1.- Farm wage rates and related data, United States, 1935-39 average and 1940-50 inclusive

(Index numbers 1935-39 = 100)

Period or year	Farm employment			Gross farm production 2/		Farm wage rates 4/	Ratio of farm wage rates to	
	Total 1/	Family 1/	Hired	Total	Per worker 3/		Production per worker	Gross farm income per worker 5/
1935-39	100	100	100	100	100	100	100	100
1940	100	99	103	108	108	107	99	101
1941	98	97	101	111	113	125	111	92
1942	98	97	101	123	126	163	129	90
1943	97	97	96	120	124	217	175	95
1944	95	97	88	124	131	263	201	108
1945	93	96	83	123	132	297	225	113
1946	95	98	85	126	133	320	241	108
1947	96	98	88	121	126	346	275	100
1948	95	96	91	131	138	365	264	103
1949	92	93	89	129	140	354	253	106
1950 6/	89	90	85	126	142	352	249	103

1/ Includes farm operators and members of their families working without wages.
2/ Includes value of farm-produced power of horses and mules.
3/ Based on total farm employment and total gross production.
4/ Simple average of quarterly indexes seasonally adjusted.
5/ Because of the increase in volume of production and the increase in the price of farm products, the gross farm income per worker has increased at about the same rate as have farm wage rates from the prewar years of 1935-39 to 1950.
6/ Preliminary.

progressively more farm products have been produced by fewer farm workers. The downward trend in farm employment has continued in recent years. But the present advanced state of farm technology and the need for high-level food production means that it is necessary to retain a basic core of experienced regular workers on farms. Present Selective Service policies recognize this need. But farmers also are likely to seek to improve their competitive position for labor by increasing farm wage rates and by improving working and living conditions for farm workers. This would aid in keeping a sufficient number of competent workers on farms. A further rise in productivity of farm labor should enable commercial farm operators generally to carry through their production plans without unduly increasing labor costs per unit of farm output.

Farm Power and Machinery

Prices of farm machinery increased during the last half of 1950, and wholesale prices now are about 10 percent higher than in 1949 and the first half of 1950. Since 1941 the relation of prices of new machinery to prices of most farm products and to farm incomes and farm wages has favored purchase of a large volume of farm machinery. Increased acreages of the major crops, especially cotton, corn and wheat will contribute to increased demand for machinery in 1951. High farm incomes and reduced labor supplies in 1951 are also expected to influence farmers to buy more machines and equipment than otherwise.

Production of farm machinery in 1951 probably will be somewhat less than the high annual production of the past three years. The issuance by NPA of Order M-55 authorizing farm machinery manufacturers to use DO priorities for the month of June should greatly help manufacturers to obtain the materials they need to meet farmers' machinery requirements. It is expected that assistance will be continued beyond the month of June. Production of farm machinery in 1951 is expected to be sufficiently high to maintain farm production at high levels. But production of some of the newer types of machines may not be sufficient to meet demands. The total volume of power and machinery on farms now exceeds that of any previous year.

Complete details of farm machinery production in 1950 are not yet available. Owing largely to labor-management disputes in the last half of 1950 in several of the major producing companies, total output for the year probably was moderately below the high output of the two previous years. Total volume of exports of farm machinery in 1950 was about 20 percent below the large 1949 exports. Exports in 1950 to the ERP countries, including dependent territories, were about 30 percent below 1949 exports. In many foreign countries the backlog of machinery orders has about been filled. Production of machinery in foreign countries has increased and has contributed to reduced exports of machinery from the United States.

Total volume of power and machinery (including workstock) on U.S. farms on January 1, 1951 was a record high and probably about 75 percent higher than the average of the prewar years 1935-39 (table 2). This increase in total power and machinery on farms has taken place, notwithstanding a decrease since the prewar period of about 50 percent in the numbers of workstock.

Numbers of work animals on farms have declined about 10 percent per year since 1945. Because of the decreased demand for workstock, prices have been low and the size of the colt crop has continued to decrease. The 1950 colt crop of 136,000 was the smallest in over a century. Colt crops of this size would maintain a total horse and mule population of around 2,500,000 head. There were around 6,750,000 head of farm horses and mules of all ages on January 1, 1951. Of this number about 6,260,000 were workstock (3 years old and over). This was only 30 percent of the peak number of 1923 and only slightly more than half of the number on January 1, 1940.

Table 2.- Farm power and machinery and related data, United States, 1935-39 average and 1940-50

(Index numbers 1935-39 = 100)

Year or period	Number on farms, January 1 1/						Volume on farms January 1 2/		Gross farm income calendar year 3/	Prices received by farmers
	Horses and mules, all ages	Work stock 3-years old and over	Colts under 1-year of age	Tractors	Auto-mobiles	Motor-trucks	All machinery and equipment other than tractors and other motor vehicles	All farm power (including work animals) machines and equipment		
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
1935-39	100	100	100	100	100	100	100	100	100	100
1940	92	89	101	124	106	108	119	106	106	93
1941	90	87	98	135	111	113	126	110	133	115
1942	87	84	85	152	120	119	140	116	178	148
1943	84	83	69	169	112	132	157	121	221	179
1944	80	81	62	178	107	142	161	121	232	183
1945	76	77	54	195	107	153	176	126	244	193
1946	70	72	41	208	107	159	193	130	280	219
1947	64	66	35	225	116	178	214	137	332	257
1948	58	61	31	253	127	197	247	150	336	266
1949	52	55	27	281	136	216	281	163	308	233
1950	47	50	22	307	149	226	303	173	307	239
1951 4/	43	46	18							

1/ The 1935-39 average was for horses and mules all ages, 15,750,000 head; for workstock 13,700,000 head; for colts 744,000 head; for tractors 1,244,000; for automobiles 3,896,000; and there were 973,000 motortrucks.

2/ In terms of 1935-39 prices.

3/ Includes Government payments.

4/ Preliminary.

The number of all tractors on farms January 1, 1951 probably was over 4 million. Farmer discards of various types of machines in 1950 are believed to have averaged more than in recent years. Dealers' stocks of farm machinery on January 1, 1951 are believed to have been less than the high stocks of a year earlier but higher than for any other recent year.

Feed

Although stocks of feed grains were a record high on January 1, 1951, requirements for feed for livestock and other purposes are so high that stocks of feed grains this fall will be down one-fourth from those of the previous year. Thus, more feed grains will be used up during the current feeding year than were produced in 1950. With demand for meat and other livestock products high and livestock numbers increasing, there is need for a much larger feed grain crop in 1951 than in 1950.

Prices of feeds are about 10 percent higher than 6 months ago and more than 20 percent higher than a year ago (table 3). Prices of corn, oats, and barley on March 15 were near parity, the legal minimum level at which ceilings can be established on the commodities. Prices of wool and lamb, beef cattle and veal calves were far above parity, hogs were at parity and milk was slightly below parity. Eggs and chickens were about 10 percent below parity.

On March 15 returns per $1.00 of feed fed to sheep and beef cattle were far above the 1935-39 average, returns for hogs and milk were above average and returns for butterfat, eggs and chickens were about 10 percent below average. Returns per dollar of feed cost were considerably higher than a year ago for sheep, cattle and milk; the largest increase being for sheep (table 4). Prices of wool and lamb are much higher than a year ago.

The prospective tight feed-grain situation suggests that livestock and poultry producers should avoid feeding practices that use feed extravagantly. Most practices that save feed also reduce production costs. The high returns per $1.00 of feed for beef cattle encourages the feeding of grain to cattle. Probably more grain is fed than necessary to stock cattle and breeding herds. If plenty of good roughage is available, little if any grain is needed in wintering these cattle. It is generally poor economy to feed grain in the winter to stock cattle if they are to be run on pasture the following summer.

Feed used to get excessive finish on cattle would produce much more meat if used to feed more cattle. But, it may be profitable to the individual farmer as long as prices of top grade of cattle are much higher than for those with less finish. However, price spreads between the top and lower grades are currently narrowing. More hay, pasture, and silage and less corn will give a moderate finish at a lower cost. Grain requirements of cattle while on pasture are less than in drylot and enables beef to be produced at lower costs.

Table 4.- Returns per $1.00 of feed cost, United States, March 15, 1951 with comparisons 1/

Item	1935-39 average	March 15, 1950	September 15, 1950	March 15, 1951
	Dollars	Dollars	Dollars	Dollars
Eggs	1.72	1.33	1.56	1.56
Chickens	1.84	1.56	1.47	1.61
Milk	1.92	1.84	1.89	1.94
Butterfat	1.55	1.43	1.37	1.40
Hogs	1.50	1.65	1.80	1.64
Beef	1.39	2.11	2.35	2.53
Sheep	1.44	1.67	1.92	2.64
	(Index numbers 1935-39 = 100)			
	Percent	Percent	Percent	Percent
Eggs	100	77	91	91
Chickens	100	95	80	88
Milk	100	95	98	101
Butterfat	100	92	88	90
Hogs	100	110	120	109
Beef	100	152	169	182
Sheep	100	116	133	183

1/ The following quantities of feed were used in calculating feed cost: 7 pounds of poultry ration per dozen eggs; 4½ pounds of poultry ration per pound of chicken; 7½ bushels of corn plus 20 pounds of soybean meal per 100 pounds of hogs; 30 pounds of concentrate ration fed to milk cows in milk selling areas plus the value of 110 pounds of hay, per 100 pounds of milk; 7½ pounds of concentrate ration fed to milk cows in cream selling areas plus the value of 27.5 pounds of hay in Minnesota and Iowa, per pound of butterfat; 3 bushels of corn plus 600 pounds of hay per 100 pounds of beef cattle; 2 bushels of corn plus 1,500 pounds of hay per 100 pounds of sheep and lamb. It was assumed that for each 100 pounds of sheep and lamb produced 20 pounds of wool was produced from the same feed. The quantity of hay for milk cows, beef cattle and sheep includes an allowance for silage and pasture. It was assumed that the feed nutrients from pasture would cost 1/4 as much per pound as they would if obtained from hay.

Table 3.- Average prices of feeds in the United States, March 15, 1951 with comparisons

Item	Unit	March 15, 1950	September 15, 1950	March 15, 1951
Prices received by farmers				
Corn	Bushels	$ 1.19	$ 1.44	$ 1.60
Oats	do.	.72	.73	.92
Barley	do.	1.10	1.14	1.34
Sorghum grain	Cwt.	1.93	1.77	2.12
Hay, baled	Ton	21.20	20.30	23.10
Feed grains and hay, Index number (1935-39=100)		183	204	233
Prices paid by farmers				
Mixed dairy feed 16%	Cwt.	3.41	3.64	4.07
Laying mash	do.	4.34	4.60	4.92
Cottonseed meal	do.	3.74	4.35	4.89
Soybean meal	do.	4.11	4.44	4.75
Linseed meal	do.	4.26	4.34	4.55
Meat scrap	do.	6.15	6.75	6.56
Bran	do.	2.86	3.08	3.31
Middlings	do.	3.00	3.28	3.47
Alfalfa hay, baled	Ton	31.80	29.60	34.10
Prices paid by farmers for feed, Index number (1935-39=100)		191	203	224
Average value of concentrate ration fed to poultry and milk cows 1/				
Fed to poultry	Cwt.	3.40	3.68	4.00
Fed to milk cows in milk-selling areas	Cwt.	3.01	3.21	3.54
Fed to milk cows in cream selling areas	Cwt.	2.62	2.84	3.21

1/ Value of the corn, oats, oil meal, milk feed, commercial mixed feed, etc., making up 100 pounds of "grain" ration.

Some practices will save feed and keep down costs in hog raising such as:

(1) Holding market weights near last year's levels - about 220 pounds in the eastern Corn Belt and 240 pounds in the western Corn Belt.

(2) Feeding a ration balanced with protein and other supplements. It is false economy to feed little or no protein supplement to hogs, although a saving in cash expense is made by such a practice, the actual cost per pound is increased since 1 pound of protein feed will replace 2 or more pounds of corn. Also hogs will reach market weights sooner when a balanced ration is fed.

(3) Running hogs on good pasture during the summer--good pasture will save 10 percent of the grain and considerable protein supplement in fattening hogs.

(4) Lowering death loss of pigs--a pig at birth already has cost 150 pounds of feed whether it lives or dies.

Feed can be saved and costs lowered by carefully culling milk cows. At the present time an average of 4 heifers are raised for every 17 milk cows. Three heifers would be sufficient if the good cows were kept longer.

An ample ration of good quality roughage will produce about 15 pounds of milk per cow per day without grain. The grain fed should be for the milk above this level. Feeding grain to milking cows according to their individual production will save feed. Many low producing cows are fed too much grain. On the other hand, good hay and pasture alone do not furnish sufficient feed for high producing milk cows.

Poultry producers do not have the flexibility other livestock producers have in varying the rate of feeding or in selecting kinds of feed because a reduction in feed per bird or in quality of feed probably will reduce output more than it reduces cost. Many poultrymen, however, can save feed by using feeding equipment that reduces waste, and by culling out low producing hens.

Pastures and ranges supply one-third of all the feed consumed by livestock in this country. Many of these pastures can produce much more feed with proper use of fertilizers, seed and renovation. Some irrigated pastures have produced nearly 1,000 pounds of gain on beef cattle per acre in a season. Even 200 pounds of gain per acre at present prices of cattle will pay for a lot of fertilizer and seed. Fertilizer properly applied to pastures will lower the cost per unit of feed from pastures.

Seeds

Retail prices of 15 out of 27 seeds of legumes, grasses, and grains were higher on March 15 of this year than last. Of the legumes, prices of common and Grimm alfalfa, alsike clover, white clover, and Korean and Kobe lespedeza were higher this year, whereas prices of red clover, sweetclover, Ladino clover, and sericea lespedeza were lower. Most of the grass seed prices were lower this year than last, with sharpest declines for smooth brome, timothy, crested wheatgrass, redtop, and common ryegrass. Prices were higher for Kentucky bluegrass, Sudangrass, Siberian millet, and orange sorgo ("cane"). Prices of seed grains--corn, wheat, oats, and barley--were higher in mid-March than a year ago.

Compared with the 1945-49 average, March 15 prices of 19 seeds were higher this year, and 8 were lower. Largest increases from the 5-year average prices were recorded for redtop, timothy, Sudangrass, common alfalfa, orchard grass, and Kentucky bluegrass in the order listed. On the other hand, declines from the average were sharpest for sericea lespedeza, Ladino clover, red clover and orange sorgo.

Current supplies (production plus carry-over and imports) of 30 legume and grass seeds total nearly 1.5 billion pounds; the largest on record, and more than 50 percent greater than a year ago. Compared with the 1945-49 average, these supplies are largest for lupine, Ladino clover, tall fescue, Austrian Winter peas, hairy vetch, red fescue, crimson clover, sweetclover, and smooth brome. The only kinds of seeds the supplies of which are much (one-fifth or more) below the 5-year average are Hungarian vetch, redtop, Sudangrass, and alfalfa seed from the central group of producing States. Supplies of all field seeds except northern and central alfalfa seed appear to be fully adequate to meet prospective demands this spring.

Because of the current emergency, relatively less attention is likely to be paid to the production of legume and grass seeds this year and more to food and feed crops. To counteract, in part, this trend, support prices designed to encourage seed production have been announced by the U. S. Department of Agriculture for 7 winter cover crop and 31 hay, pasture, and range grass seeds. Furthermore, the Department has recommended, in connection with its production guides, increased production this year over last for northern and central origins of alfalfa, Ladino clover, Kobe lespedeza, smooth brome, crested wheatgrass, and crimson clover, and decreases of only 1 to 5 percent below the high level of production last year of southern white clover, tall fescue, orchard grass, hairy vetch, and common and Willamette vetch. However, rather large (18 to 43 percent) reductions from the record 1950 production are recommended for red clover, lupine, and common ryegrass.

Fertilizer

Current relationships between prices of fertilizer and farm products are sufficiently favorable to warrent increased fertilizer applications as a means of increasing crop production. Steadily increasing demand, and the probability of shorter supplies of some materials particularly phosphoric acid may contribute to further rise in fertilizer prices.

The big problem is that of providing sufficient supplies of fertilizer to meet the needs of farmers. At present, supplies of phosphate fertilizers are the most critical. For the year ending June 30, 1951 they will be less than in the previous year. Nitrogen and potash supplies available for farmers will be significantly larger than last season but, at least in the case of nitrogen, supplies probably will be somewhat shorter of quantities farmers would buy. If adequate supplies were available fertilizer consumption next year probably would increase even more rapidly than it has during the past several years.

The use of fertilizer is important in attaining higher levels of food and fiber production. Improvements in other practices will continue to contribute to increased production, but the potentialities for quick increases in production are better through use of fertilizer than by most other means. Expansion in production of feed and forage crops to sustain higher levels of livestock production will depend much on substantial increases in the use of fertilizers.

A survey of fertilizer use in 1947 indicates that a little more than one-fourth of all fertilizer used in the United States that year was applied to the corn crop. This is nearly 2-3/4 times as much as was used on the cotton crop. About 15 percent of all fertilizers was used on small grains. Less than 7 percent of the total fertilizer used that year was used on pasture but some of the fertilizer used on previous crops benefits succeeding hay and rotation pasture. About 28 percent of the combined acreage of small grains and hay, and 9 percent of the pasture land in the humid regions received applications. In contrast, about 62 percent of the combined acreage of some important intertilled crops (corn, cotton, tobacco, sugar crops, potatoes, sweetpotatoes, and vegetables) received fertilizer applications in 1947.

Rates of application per acre on small grains, hay and pasture are about 50 percent lower than on the combined treated acreage of intertilled crops mentioned above. The rate of application on corn was about 35 percent below the average rate for the group of intertilled crops. Rates of application on all feed (including corn) and forage crops are generally well below what experimental evidence indicates would be most profitable at existing price relationships. Most farmers have a long way to go in the application of fertilizer before a point is reached where application of fertilizer makes its optimum contribution to the farm business. In balancing costs to attain highest net farm returns, proper use of fertilizer where adapted, is important.

Building Materials, Supplies and Containers

Prices paid by farmers for materials used in the construction and maintenance of farm buildings and fences are at record high levels. They are about 17 percent higher than a year ago and about 138 percent higher than the 1935-39 average. From December 1949 to December 1950 retail prices of selected items increased as follows: framing lumber, 24 percent; rough boards, 17 percent; dressed boards, 21 percent; wood shingles, 36 percent; nails, 5 percent; galvanized roofing, 14 percent; cement,7, percent; concrete blocks, 5 percent; house paint, 4 percent; and barbed wire, 7 percent. Since December the trend of most of these prices has been upward but at a slower rate.

These increases in prices of building materials have raised the cost of farm building construction to the highest levels on record. For example, at U. S. average prices, the materials (excluding sand and gravel) used in the construction of a typical poultry house large enough for 200 layers (16' x 48') would have cost slightly less than $300 in 1940. By 1948 successive price increases had raised the cost of the same bill of materials to $730. Prices of many building materials dropped somewhat in 1949 and by December 15 of that year the cost of the same materials was down to $675. However, by December 15, 1950 the cost of these materials had risen to $770 and has risen since then.

To a large extent, recent increases in prices of building materials were brought about by the wave of buying that followed the beginning of the war in Korea. Total construction activity (farm and non-farm) in January 1951 was 20 percent higher than in January 1950. Inventories of building materials in retail lumber yards January 1, 1951 were substantially larger than a year earlier when they were considered in good supply. Sawmills in the Pacific Northwest were working multiple shifts in January and February of this year, and lumber was being produced at a rate 25 percent higher than for the 1950 average. Shipments of lumber were running ahead of production yet orders were accumulating faster than they were being filled. In situations like this, prices are often above the level necessary to maintain normal output. If the demand for lumber declines later in the year, as is expected, the price of lumber also may go down.

Construction materials made of metal such as structural steel, metalroofing, and siding, pipe and tubing, fencing, nails and staples may be in short supply but quantities available for farm construction in 1951 are expected to be more adequate than during the last national emergency. Prices, however, will be substantially higher.

Increased production of bale ties in recent months should prevent a repetition of last year's severe shortage. However, because of the proposed increase in production of automatic wire balers and the fact that there is not a standard size wire for all makes of balers, uneven distribution may develop and spot shortages may occur in some areas.

Production of baler and binder twines probably will be adequate to meet 1951 requirements. There is considerable advance seasonal buying and some evidence that some farmers are buying more than they expect to use this year. If many do this there will not be enough twine to go around. The BLS wholesale price index of binder twine on January 1, 1951 was 12 percent above the price on January 1, 1950. The wholesale price of manila rope was 17 percent higher.

Containers will cost more in 1951 mainly because of increases in prices of raw materials. The wholesale price of burlap was 70 percent higher in January 1951 than a year earlier. There also have been substantial increases in prices of cotton cloth, paper, lumber, nails and other materials used in the manufacture of containers.

Supplies of wooden containers, except wire bound, used by farmers in marketing farm products are expected to be adequate to meet 1951 requirements. Burlap, cotton and paper bags probably will be in short supply. Farmers, dealers and others should conserve and repair bags and containers. The high cost of containers will encourage conservation practices. The farmer who pays 30 to 50 cents for a bag probably will take good care of it and return it promptly.

Insecticides and Fungicides

Insecticides and fungicides will be in stronger demand in 1951 than in 1950, and the prices will be higher. The carryover at the end of September 1950 was the lowest since 1946. Heavy infestation of insects on cotton in 1950 virtually used up all insecticides in the Southeastern States. The expected increase in cotton acreage in 1951 probably will require more insecticides than were used last year. The expected heavy attack by corn borers in the Midwest did not develop last year, consequently some DDT was carried over in that area which could not be transshipped to the cotton belt.

In proportion to demand, production of pesticides is not expected to be as large in 1951 as it was in 1950 primarily because of shortages of some raw materials. Those in shortest supply are chlorine, benzene, and sulfur. Benzene and chlorine are used in the production of DDT, benzene hexachloride, lindane, methoxychlor, (2-4-D) weed killer, and a number of other newer insecticides. Dusting sulfur is essential for the control of some pests. Because it has been cheap, it has been used more freely than necessary. Due to the shortage of sulfur this year, dusts will be formulated with talc in place of sulfur wherever possible to conserve supplies of the latter. Containers for shipping pesticides are in short supply, and may hinder proper distribution of available materials.

Prices of several of the important pesticides have risen considerably during the past 8 months. Wholesale prices quoted in July 1950 compared with those for February 1951 showed the following changes in price for some of the important pesticides. Benzene hexachloride, 65 percent higher; DDT, 50 percent higher; copper sulfate, 10 percent higher; and sulfur, 25 percent higher. Prices quoted for some other pesticides such as aldrin, lindane, calcium arsenate, pyrethrum, and rotenone were the same in February 1951 as in July 1950. One factor that should not be overlooked, however, is that last July these materials were available, whereas, in February it was difficult to obtain either DDT or pyrethrum at prices quoted.

In recent years benzene hexachloride, dieldrin, toxaphene, and aldrin have become important insecticides for the control of boll weevil on cotton. Supplies of these insecticides are likely to be tight in 1951. Calcium arsenate, however, will be available as an alternate.

Farmers can aid in the equitable distribution of insecticides and fungicides by purchasing their minimum needs early in the season and storing them in a dry place. This will enable manufacturers who have adequate plant capacity, but who lack storage space, to produce the materials well in advance of the time they are needed. Most insecticides if properly stored can be carried from one season to the next without loss of their effectiveness. Growers should plan their insect control programs so as to utilize any of the various effective insecticides which are available.

Certain cultural practices reduce losses from insects and often reduce and may eliminate the need for insecticides. Reasonably early planting of adapted varieties often enables plants to produce maximum growth before insects attack. A fertile soil likewise will help plants to make rapid growth and will enable them to withstand injury after insects attack them. The destruction of host crops where pests breed or hibernate will reduce the number of insects in the following season.

Farm Land Values and Rentals

Farm land is currently selling at record high prices in many parts of the country. Advances since last July have raised average values in many States well above the previous peaks reached in early 1949. Increases were moderate during the first half of 1950, averaging about 2 percent for the country as a whole, but since then the improved outlook for farm earnings has resulted in sharp gains throughout the country. By November 1950, the national index was up 4 percent from March and the upturn has continued at an accelerated rate. Preliminary estimates this March indicate values have increased an additional 6 to 8 percent since last fall, and the total increase for the country as a whole, from March a year ago is expected to be at least 12 percent.

Regionally, the largest gains since last July have been in the North Central States and in the Southwest. Tentative estimates as of March 1, indicate increases of 15 to 20 percent from a year earlier for Ohio, Indiana, Illinois, Iowa, Minnesota and Nebraska. Other States outside the Midwest that are expected to show increases within this range include Texas, Arkansas, Arizona, Wyoming and Florida. Prices of irrigated and grazing land in the Mountain and Pacific Coast States appear to have increased somewhat more than dry farming land, but are still slightly below their previous peaks in November 1948.

The sharp rise in land values since Korea is based on higher level of farm income anticipated in 1951 and later years rather than on the income realized in 1950. Net income of farm operators in 1950 was 8 percent below 1949, and nearly 27 percent below the 1947 peak. With prices received by farmers in January and February 1951 about a third higher than a year earlier, however, and with record or near-record farm production in prospect (assuming normal weather), a substantial increase in net farm income is anticipated. This situation, coupled with the removal of acreage limitations on all crops except tobacco and peanuts has increased the demand for farm land. Investors and others with surplus funds seeking a hedge against possible inflation also have added to the demand. These considerations also have served to limit the number of farms on the market. Present owners are reluctant to sell, even at current prices, because of the higher level of farm earnings in prospect and the lack of other investments that will yield as large a return.

Prospective buyers are apparently experiencing little difficulty in obtaining sufficient credit to finance their purchases. About two-fifths of all farms purchased in recent years have been for cash, and down payments on credit-financed purchases have averaged between 45 and 50 percent of the purchase price. All major classes of lenders have shown a substantial increase in both the number and dollar-value of farm mortgages during the last half of 1950. Only a portion of these mortgages were used to finance new farm purchases, however, but the increase in farm mortgage borrowing indicates that little difficulty is experienced in obtaining mortgage credit.

The preliminary estimate of the gross value of rental payments in 1950 was about 6 percent higher than the revised estimate for 1949. Cash rents were essentially unchanged from a year earlier, but the value of crop-share rents was 7 percent higher, reflecting the higher level of prices of most farm products during the fall of 1950. Landlords'expenses were higher than in 1949, due mainly to the 12 percent increase in real estate taxes on rented land.

Preliminary estimates place the value of net rent obtained from cash rents, crops, livestock and government payments, at 1.8 billion dollars in 1950. This is 12 percent higher than the revised estimate for 1949, but it is still lower than net rentals in 1946, 1947 and 1948. The net rent for 1950 represents a return of slightly less than 7 percent on an investment valued at about 27 billion dollars on March 1, 1951. This rate of return is slightly below the revised rate for 1949 due to the fact that farm real estate values increased more than net rents during this period.

Interest, Taxes, and Insurance

Interest payments - Total interest charges on farm-mortgage debt are expected to be about 9 percent higher in 1951 than a year earlier, and about 32 percent above 1946 when such charges were lower than in any year since 1910. This year's increase will again result from the expansion of outstanding mortgage debt rather than from a significant change in the average rate of interest. The average rate of interest paid on farm-mortgage loans will be very nearly the same in 1951 as in 1950.

Total interest costs on farmers' non-real-estate debt (excluding Commodity Credit Corporation price support loans) are expected to be from 15 to 20 percent higher during 1951 than in 1950. This 1951 level will be more than double 1945, the year World War II ended.

Increased credit costs during last year have resulted mainly from a large expansion in the volume of credit used by farmers. Higher wage rates and higher prices paid for equipment, livestock, and other items needed in farm production have been important causes of higher borrowings. Also, many farmers have recently expanded livestock feeding operations, and especially since the start of the war in Korea, there has been considerable forward buying by farmers of machinery, automobiles, and consumer durable goods for which credit has been used.

Interest rates on non-real-estate credit also have increased. Some lenders this year have increased rates to farmers by as much as one-half of 1 percent because of higher operating expenses and higher costs for loan funds.

The large volume of non-real-estate debt is significant for reasons other than the interest cost to farmers. Because of its short-term character, large repayments of principal are a near term requirement; and these principal payments will reduce the cash that farmers will have available for other purposes.

Taxes - Farmers in most States can expect to pay somewhat higher taxes in 1951 than they did in 1950. All levels of government - local, State, and Federal - will need larger revenues to meet increasing costs and expanding services which to some extent grow out of the defense effort.

Local governments continue to rely chiefly upon property taxes to provide most of the funds to meet the growing expenditures for public services, including school, road, and welfare activities. Preliminary indications are that farm real estate taxes levied in 1950, and payable largely in 1951, will average about 4 or 5 percent higher than in the previous year. If these prove to be correct, average taxes per acre will approximate $0.64 compared with $0.61 levied in 1949 and will again set a new all-time record. The index of farm real estate taxes per acre levied in 1950 (1909-13=100) will approach 310 compared with the previous record level of 296 in 1949. Taxes on personal property also are expected to be higher.

Taxes per $100 of full value, on the other hand, probably will be somewhat lower, as farm real estate values are expected to rise more than taxes. To the extent that higher real estate values reflect higher current incomes, they indicate some improvement in the tax-paying ability of farmers; but there is some evidence that the higher prices for real estate are caused partly by people buying as a hedge against inflation.

State governments also have had increasing need for revenue, and as a consequence taxes other than those on property will be increased. This is highly probable for 1951, as nearly all State legislatures will be in regular session. Proposed legislation indicates that some additional States may adopt sales taxes, whereas others that already have them will increase their rates or coverage. Special excises, such as those on alcoholic beverages, tobacco, and gasoline, may be increased in some States. Some States may increase income tax rates, and it is possible that others may adopt this source of revenue. These higher or new taxes may be offset partly by the lowering or elimination of others, but the net result will undoubtedly be a larger tax bill in the aggregate.

Tax needs of the Federal Government can be expected to increase in 1951 as the defense program develops. Higher income tax rates have been in effect since October 1, 1950 and further increases are under discussion. Payments of these taxes by farmers in 1951 may show no increase because they are paid on the 1950 farm income which was lower than 1949 but 1951 is expected to be a year of higher incomes. Although income taxes are not costs in a technical sense they have a direct bearing upon the cash funds that farmers have to spend.

In addition to an increase in income tax rates, the Federal Government has proposed to expand revenues by raising special excise rates, such as those on alcoholic beverages, tobacco, gasoline, and luxuries. Added to the increases expected from other levels of government, these higher rates leave little doubt that farmers as well as other groups will pay substantially higher taxes in 1951 than in 1950 and probably will continue to do so for some years to come.

Insurance - Insurance carried by farmers' mutual fire insurance companies totaled about $25 billion on January 1, 1951 - about 8 percent more than was in force on the same date the year before. This compares with increases of about 9 percent in 1949 and 12 percent in 1948. The slower rate of increase is not expected to continue if property values and building replacement costs continue upward.

Losses on farm property paid from insurance carried by farmers' mutuals also increased in 1950, continuing the upward trend which was interrupted in 1949 for the first time since 1942. Losses are expected to increase as the amount of insurance carried increases; however, losses per $100 of insurance also increased in 1950. They amounted to 14.2 cents, compared with 13.8 cents in 1949 and 18 cents in 1948.

The expenses of farm mutuals are comparatively low, and have tended to decrease - per $100 of insurance - with increases in volume carried. They averaged about 9.1 cents in 1948, 8 cents in 1949 and 7 cents in 1950. Thus the total cost to the farmer averaged about 27 cents in 1948, 22 cents in 1949 and 21 cents in 1950. The cost in 1950, per $100 of insurance, was about 16 percent lower than it was in 1940.

The safety or reserve funds of farm mutuals have increased steadily for many years in total amount and also per $100 of insurance, because of the increase in volume of insurance carried. Such reserves belong to farmer-members, and the companies draw upon them to help pay losses in years when losses are heavy - thus helping to stabilize year to year assessment rates to farmers. The reserves of farm mutuals amounted to about 48 cents per $100 of insurance in 1948, 51 cents in 1949 and 52.5 cents in 1950.

Cost Changes by Type of Farm

Costs per unit of product on groups of commercial family-operated farms have differed considerably from year to year. In general they are much above prewar levels, but have not increased as rapidly as prices paid for goods and services used in production. During the past 3 years prices paid by farmers averaged slightly more than double the prewar 1935-39 average. During the same period, however, costs per unit of production for several important types of family-operated farms averaged less than double the prewar average. Unit production costs have gone up less rapidly on many farms because of increased size of farm, higher yields and larger output, and increased production efficiencies.

Compared with prewar, unit production costs generally have gone up more on livestock farms than on crop farms (table 5). Although output per farm has been higher than in the prewar years on all farms the increase has been greater on crop farms than on livestock farms. Fewer developments in labor-saving equipment have been available to livestock farmers, particularly dairy farmers, and they have had less opportunity to increase the size of their operating units than have crop farmers.

Hybrids and other higher yielding varieties of seeds and favorable weather in recent years have been particularly favorable to crop producers. During the past 3 years corn, soybean, and oat yields on Corn Belt farms have averaged 170, 140, and 142 percent respectively of the prewar 1935-39 average. During the same period wheat yields on winter wheat farms averaged about 215 percent of the 1935-39 average. In 1951 winter wheat farms obtained fairly high yields whereas, yields on winter wheat-grain sorghum farms were comparatively low. This accounts for most of the higher unit costs in 1950 on wheat-grain sorghum farms than on the winter wheat farms farther north.

In 1950 unit production costs were about the same or slightly higher compared with 1949 for dairy and hog-dairy farms. They were about the same for Corn Belt farms, but with the exception of wheat-grain sorghum farms they were lower for wheat farms. Primarily because of smaller harvested averages and lower yields of lint cotton unit production costs in 1950 were higher than in 1949 on Southern Plains and Black Prairie cotton farms. Although cotton acreage was cut in 1950 by about one-fourth on the Mississippi Delta farms, total production was only slightly lower than in 1949 because cotton yields were higher in 1950. Unit costs, however, were lower in 1950.

Indexes of costs per unit of production (excluding price change) provide a measure of changes in quantities of goods and services used in production per unit of output. Cost charges measured this way have varied among types of farms, but in most instances they have been low relative to

Table 5.- Cost of production per unit of product, commercial family-operated farms by type, selected years

(Index numbers 1935-39=100)

Item	Cost per unit of production							
	At current prices				Excluding price changes			
	1935-39	1948	1949	1950 1/	1935-39	1948	1949	1950 1/
	Index	Index	Index	Index	Index	Index	Index	Index
Dairy farms								
Central New York	100	200	204	194	100	90	97	93
Southern Wisconsin	100	201	176	200	100	88	77	88
Corn Belt farms								
Hog-dairy	100	184	185	191	100	76	76	79
Hog-beef-fattening	100	133	144	141	100	58	60	61
Hog-beef raising	100	142	163	161	100	62	70	70
Cash grain	100	147	171	174	100	69	78	79
Spring wheat farms (No. Plains)								
Wheat-corn-livestock	100	127	175	146	100	57	77	65
Wheat-small grain-livestock	100	101	116	99	100	44	51	44
Wheat-roughage-livestock	100	89	130	105	100	41	60	50
Winter wheat farms (So. Plains)								
Wheat	100	81	100	81	100	38	46	38
Wheat-grain sorghum	100	80	75	106	100	38	35	50
Cotton farms								
Southern Plains	100	221	159	177	100	89	56	71
Black Prairie, Texas	100	265	236	264	100	103	87	105
Delta Area, Mississippi 2/	100	174	222	176	100	74	105	83

1/ Preliminary.
2/ Two-mule farms.

prewar averages. This indicates that farmers generally are now producing more efficiently than 10 or 15 years ago. It also shows that farmers who have been able to take advantage of labor-saving equipment and increase size of operating unit and output have reduced physical costs most. The sharp decline in this index on the wheat farms are due in large part to the much more favorable yields in the 1940's than during the 1935-39 period.

Compared with prewar, production per hour of man labor in recent years on many of these farms has increased by 50 percent. It has more than doubled on some of the wheat farm types.

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